

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021600**Date Inspected:** 01-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Xu Le Feng.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 10**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

BK008A6-001-023, 024, 160

BK008A3-001-018, 041, 042

BK008A4-001-008, 034, 035, 060

BK008A8-001-036, 023, 024

BK008A3-001-060, 061, 034

BK008A4-001-075, 049, 023, 024

NDT Notification No-08423

This QA Inspector observed the following work in progress:

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BAY 10:

FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040533, Perform Flux Core Arc Welding (FCAW) on OBG Bike path deck plate. Joint identified as BK014A1-001-009. ZPMC CWI Identified as Guo Yan Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-ESAB. For more information see attached picture number 1.

This QA Inspector observed ZPMC qualified welding personnel identified as 052075, 040302, Perform Flux Core Arc Welding (FCAW) on OBG Bike path. Joint identified as BK010A5-001-016, 017, 022, 023. ZPMC QC Identified as Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132-ESAB.

Heat Straightening:

This QA Inspector observed ZPMC personnel performing Heat Straightening on OBG Bike path deck plate using hand torch, Bike path identified as BK009A1-001. Maximum deformation observed is about 18mm. ZPMC QC Identified as Lijun with temporary heat straightening report HSR1-B-10129.

SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040582, 057220 Perform Shielded Metal Arc Welding (SMAW) on OBG Cantilever beam. Joint identified as BK15B-001-001 and BK15-001-013. ZPMC QC Identified as Yun Chang Fang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2213-Tc-U4c. For more information see attached picture number 2.

SMAW Process Repair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 040365 Perform Shielded Metal Arc Welding (SMAW) on OBG Traveler Rail. Item identified as 3005TR1, 3005TR2, 3005TR3 weld build up maximum 15mm on edge. ZPMC QC Identified as Yun Chang Fang with temporary welding repair report WRR-B-WR20322. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F) Repair. For more information see attached picture number 3.

SAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040460 Perform Submerged Arc Welding (SAW) on OBG Bike path. Joint identified as BK014A1-001-009. ZPMC CWI Identified as Guo Yan Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-L2c-S-2.

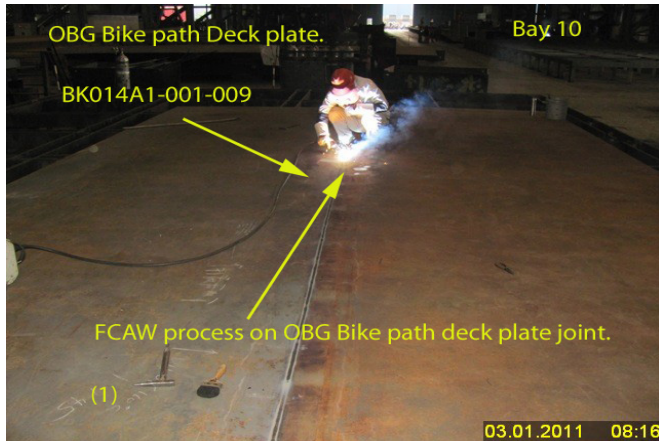
Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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# WELDING INSPECTION REPORT

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho: 150002048250, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer